

IN THE CLAIMS:

1. (currently amended) An optical microcantilever for a scanning near field microscope, the optical microcantilever comprising:

an optical waveguide having a light input/output end, a free end for propagating light incident from the light input/output end, a first side, and a second side opposite to the first side;

a tip formed on the first side and at the free end of the optical waveguide and having a microscopic aperture;

a light-blocking film disposed on the first side of the optical waveguide;

a reflecting film disposed on the second side of the optical waveguide; and

a reflecting member forming part of the reflecting film and disposed at the free end of the optical waveguide, the reflecting member having a generally planar surface for reflecting light propagated from the light input/output end of the optical waveguide and for guiding the reflected light towards the microscopic aperture of the tip, or for reflecting light propagated from the microscopic aperture towards the light input/output end of the optical waveguide.

2. (canceled).

3. (previously presented) An optical microcantilever according to claim 1; wherein at least part of the optical waveguide comprises a core and a cladding disposed on the core.

4. - 23. (canceled).

24. (previously presented) An optical microcantilever according to claim 1; wherein the reflecting member comprises a mirror.

25. (previously presented) An optical microcantilever according to claim 24; wherein the entire mirror is generally planar.

26. (previously presented) An optical microcantilever according to claim 1; wherein the entire reflecting member is generally planar.

27. (canceled).

28. (previously presented) An optical microcantilever according to claim 3; wherein the cladding surrounds the core.

29. (canceled).

30. (previously presented) An optical microcantilever according to claim 3; wherein the core has two sides; and wherein the cladding is disposed on one of the two sides of the core.

31. (canceled).

32. (previously presented) An optical microcantilever according to claim 3; wherein the core has two sides; and wherein the cladding is disposed on the two sides of the core.

33. (canceled).

34. (currently amended) An optical microcantilever comprising:

an optical waveguide for propagating light and having a first side, a second side opposite to the first side, and a tip portion formed on the first side and at a free end of the optical waveguide, the tip portion having a microscopic aperture;

a light blocking film disposed on the first side of the optical waveguide;

a reflecting film disposed on the second side of the optical waveguide; and

a reflecting member forming part of the reflecting film and disposed at the free end of the optical waveguide, the reflecting member having a generally planar surface for reflecting light propagated by the optical waveguide and for guiding the reflected light towards the microscopic aperture to generate near-field light at the microscopic aperture.

35. - 36. (canceled).

37. (currently amended) An optical microcantilever according to ~~claim 35; wherein~~ claim 34; wherein the optical waveguide has a longitudinal axis, a first section extending in a direction generally parallel to the longitudinal axis, and a second section extending from the first section at a preselected angle relative to the longitudinal axis so that the light reflected by the reflecting member is guided towards the microscopic aperture to generate near-field light at the microscopic aperture.

38. (previously presented) An optical microcantilever according to claim 37; wherein the reflecting film is disposed on the first section of the optical waveguide and the reflecting member is disposed on the second section of the optical waveguide.

39. (canceled).

40. (previously presented) An optical microcantilever comprising:

an optical waveguide for propagating light and having a longitudinal axis, a first side, a second side opposite to the first side, and a tip portion formed on the first side and at a free end of the optical waveguide, the tip portion having a microscopic aperture;

a reflecting film disposed on the second side of the optical waveguide; and

a reflecting member forming part of the reflecting film and being disposed on at least a portion of the optical waveguide, the reflecting member having a generally planar surface disposed proximate the free end of the optical waveguide at a preselected angle relative to the longitudinal axis for reflecting light propagated by the optical waveguide and for guiding the reflected light towards the microscopic aperture to generate near-field light at the microscopic aperture.

41. (new) An optical microcantilever according to claim 1; further comprising a support section supporting the optical waveguide, a first channel formed in the support section for supporting an optical fiber, and a second channel formed in the support section and disposed between the first channel and the light input/output end of the optical waveguide for accommodating a portion of the optical fiber.

42. (new) An optical microcantilever according to claim 41; wherein the first channel comprises a generally V-shaped groove.

43. (new) An optical microcantilever according to claim 41; wherein the first channel extends generally in the direction of a longitudinal axis of the optical waveguide; and wherein the second channel extends generally in a direction generally perpendicular to the first channel.

44. (new) An optical microcantilever according to claim 34; further comprising a support section supporting the optical waveguide, a first channel formed in the support section for supporting an optical fiber, and a second channel formed in the support section and disposed between the first channel and the light input/output end of the optical waveguide for accommodating a portion of the optical fiber.

45. (new) An optical microcantilever according to claim 44; wherein the first channel comprises a generally V-shaped groove.

46. (new) An optical microcantilever according to claim 44; wherein the first channel extends generally in the direction of a longitudinal axis of the optical waveguide; and wherein the second channel extends generally in a direction generally perpendicular to the first channel.

47. (new) An optical microcantilever according to claim 40; further comprising a support section supporting the optical waveguide, a first channel formed in the support section for supporting an optical fiber, and a second channel formed in the support section and disposed between the first channel and the light input/output end of the optical waveguide for accommodating a portion of the optical fiber.

48. (new) An optical microcantilever according to claim 47; wherein the first channel comprises a generally V-shaped groove.

49. (new) An optical microcantilever according to claim 47; wherein the first channel extends generally in the direction of the longitudinal axis of the optical waveguide; and wherein the second channel extends generally in a direction generally perpendicular to the first channel.

50. (new) An optical microcantilever according to claim 40; further comprising a light blocking film disposed on the first side of the optical waveguide.